

The online DQM of BESIII

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The BESIII detector is a magnetic spectrometer operating at BEPCII, a double-ring e+e- collider with center-of-mass energies between 2.0 and 4.6 GeV and a peak luminosity $10^{33} \text{ cm}^{-2} \text{ s}^{-1}$. The event rate is about 4 kHz after the online event filter (L3 trigger) at J/ψ peak.

The BESIII online data quality monitoring (DQM) system is used to monitor the data and the detector in real time using full reconstructed data. It is an essential supplement to the DAQ monitoring, which uses unprocessed data directly from the detector. I will give the review of the BESIII DQM system. The system is designed to be weakly coupled to the DAQ online system, so it can be developed under the offline environment freely. The system includes the data server, which is used to get data from DAQ, the reconstruction processes for the data reconstruction, the histogram server, which is used to collect all histograms from all reconstruction processes, and the error handling of itself, and so on.

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